

**Notice of Allowability**

Application No.

09/731,889

Examiner

Wai-Sing Louie

Applicant(s)

ISOKAWA, SHINJI

Art Unit

2814

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/7/2004.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ The drawings filed on 07 December 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

Applicant has submitted a Terminal Disclaimer on 7/30/2003 to overcome the double patenting rejection over a US Patent No. 6,180,962 and the amendment filed on 7/07/2004 has overcome the prior art rejection of the previous office action. Claims 1-8 are allowed.

### ***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

The claimed invention is a chip-type semiconductor light-emitting device, comprising:

- A pair of electrodes, at least one of the pair of electrodes including an inner portion and an outer portion, the inner portion of the at least one of the pair of electrodes residing in the same plane as the outer portion of the at least one of the pair of electrodes;
- A semiconductor light-emitting chip electrically connected to the pair of electrodes;
- A mold encapsulating the semiconductor light-emitting chip, the mold encapsulating the inner portion of at least one of the pair of electrodes, the outer portion of at least one of the pair of electrode extending substantially laterally beyond said mold; and
- A step formed in the inner portion of at least one of the pair of electrodes at an inside of the mold, and extending transversely and entirely across the at least one

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of the pair of electrodes, the step having a height increasing from an outer side to an inner side of the mold.

The prior art of record does not disclose or suggest either in singly or in combination the following limitations and other elements in the claims:

Reference Ohno et al. (US 5,227,662) disclose a lead frame, but do not disclose a pair of electrodes, where a step formed in the inner portion of the electrodes at an inside of the mold, and extending transversely and entirely across the electrodes.

Reference Ishinaga et al. (US 6,180,962) do not disclose a step formed in the inner portion of at least one of the pair of electrodes at an inside of the mold, and extending transversely and entirely across the at least one of the pair of electrodes, the step having a height increasing from an outer side to an inner side of the mold.

Therefore, the above references do not disclose the claimed invention of present application and claims 1-8 are allowed.

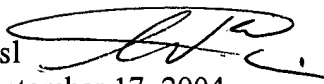
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

LONG PHAM  
PRIMARY EXAMINER

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wsl   
September 17, 2004.